

Microfluidic Pump Driven by Thermoacoustic Effect

Abstract

5 A microfluidic pump driven by thermoacoustic effect is mainly composed of a thermoacoustic device, a fluid-storing tank, and at least one microchannel, etc., wherein the thermoacoustic device may convert thermal energy into acoustic energy. Pressure fluctuation and velocity fluctuation with high frequency are generated by the acoustic wave. .
10 According to the high amplitude pressure fluctuation, the microfluid with high moving velocity emitted through microchannels. Since there is no movable part arranged in the thermo-acoustic generator. In the meantime, it indirectly drives the working fluid located in the fluid-storing tank by the manner of indirect contact. So the present invention may be applied in the
15 non-conductive fluid so as to greatly extend its field of application. Moreover, the characteristics of the fluid won't be influenced by the heating process as well. The present invention is indeed a microfluid-driving device that has inventiveness and high application value.

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